

REMARKS

Claims 7-29 remain pending. Claims 7, 13, 15, 18, 20, 23, 25, and 28 having been amended by way of the present amendment.

In the outstanding Office Action, Claims 7-29 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 7-10, 13, 15, 18, 20, 23, 25, and 28 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuda (U.S. Patent No. 4,985,538). Claims 11, 12, 16, 17, 21, 22, 26, and 27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuda in view of Amberg (U.S. Patent No. 3,760,968). Claims 14, 19, 24, and 29 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuda in view of Yoshinaka (U.S. Patent No. 4,996,291).

112 Rejections

The claim language “when the film is put in hot water...,” recited in Claims 7, 15, 20, and 25, was rejected as being unclear about whether the film is put in hot water or not and as being a process limitation. On the contrary, this claim language describes innate physical characteristics of the film in terms of a test (putting the film in hot water) and a characteristic result of the test (shrinkage). This is analogous to specifying a liquid by its boiling point. A liquid innately has a particular boiling point; hence, it is not necessary to actually boil the liquid in order for the liquid to have that boiling point. Moreover, a boiling point is not a process limitation. Analogously, the claimed film does not necessarily need to be put in hot water in order for the film to have the claimed properties because the claim language recites innate physical properties of the film rather than process limitations. Hence, this claim language is believed to be definite.

Similarly, the claim language “when the film is formed into a label,” recited in Claims 7, 15, 20, and 25, is believed to be definite for at least the same reasons as stated above.

The claim language “sec,” recited in Claims 7, 15, 20, and 25, was rejected as being an undefined abbreviation. The rejected language has been replaced with the word “seconds.”

The claim language “adhesive retention” in Claims 7-10 was rejected as having insufficient antecedent basis. The definition of “adhesive retention” is clearly described in the Specification, pages 31-32, for example. Accordingly, Applicants submit that there is no need to specify further antecedent basis in the claims.

The term “hot” in Claims 7, 15, 20, and 25 was rejected as being a relative term not defined by the claims or having a standard provided in the Specification. The term “hot” has been deleted from these claims.

The claim language “cap sealing heat shrinkable polyester film,” recited in Claims 13, 18, 23, and 28, was rejected as being unclear. These claims have been amended to replace the rejected language with “heat shrinkable polyester film for a cap sealing label,” thereby clearly reciting properties and specific use of the claimed film.

Claims 20-24 were rejected regarding the claim language “preform process” as being unclear. The definition of “preform process” is explained in the Specification, page 3, lines 23-24, and page 31, lines 18-21, for example. Therefore, Applicants submit that this language is clear and should be accorded patentable weight.

Claims 25-29 were rejected regarding the claim language “preform finish defect percentage” as being unclear. The definition of this claim language is explained in the Specification, pages 31-33, for example. Therefore, Applicants submit that this language is clear and should be accorded patentable weight.

Accordingly, the rejections are believed to have been overcome. If the Examiner disagrees, the Examiner is invited to contact the undersigned at (202) 220-4200 to discuss mutually agreeable claim language.

103(a) Rejections

Claims 7, 15, 20, and 25, as amended, recite a heat shrinkable polyester film “produced from a polyester composition containing 50 wt% to 99.9 wt% of a polyester and 0.1 wt% to 50 wt% of a polyester elastomer.” Claims 7, 15, 20, and 25 further recite the film having “a shrinkage of about 10% to about 40% along its main shrinkage direction when the film is put in water of 70°C for 5 seconds,” “a shrinkage of about 50% or more along its main shrinkage direction when the film is put in water of 95°C for 5

seconds," and "a shrinkage of about 10% or less along a direction perpendicular to its main shrinkage direction when the film is put in water of 95°C for 5 seconds."

Claims 14, 19, 24, and 29 recite a cap sealing label made of the heat shrinkable polyester film according to Claims 7, 15, 20, and 25, respectively.

As defined in the Specification, page 17, lines 27-33, for example, the polyester elastomer used in preferred embodiments of the present invention may be a polyester block copolymer comprising a high melting point crystalline polyester segment (hard segment) and a low melting point soft polymer segment having a molecular weight of 400 or more (soft segment). Due to the above feature, excellent effects can be advantageously attained. For example, shrinkage of film at low temperature such as 70°C and strength of the bonded portion of a label formed from the film can be enhanced. As a result, the preform finish property, which refers to the finish property of the entire label, including the bonded portion after a preform process at high temperature such as 200°C, shrinkage after preform process, which refers to the shrinkage at a temperature of 80±0.5°C of label after a preform process at high temperature such as 200°C, and adhesive retention of the bonded portion after a preform process at high temperature such as 200°C, can be enhanced.

In contrast, Fukuda fails to teach or suggest using the polyester elastomer recited in each of the claims. Nor does Fukuda acknowledge enhancing the preform finish property and the shrinkage after preform process and adhesive retention of the bonded portion after a preform process. Fukuda also fails to teach or suggest a high melting point crystalline polyester or a low melting point soft polymer.

Accordingly, Claims 7, 15, 20, and 25 are believed to patentably distinguish over Fukuda.

The deficiencies of Fukuda are not corrected by Amberg because Amberg also fails to teach or suggest using the polyester elastomer recited in the claims. Nor does Amberg teach or suggest a high melting point crystalline polyester or a low melting point soft polymer.

Since Claims 7, 15, 20, and 25 are believed to patentably distinguish over Fukuda and Amberg, individually and in combination, their respective dependent

Claims 8-13, 16-18, 21-23, and 26-28 are believed to patentably distinguish over these references for at least the same reasons as Claims 7, 15, 20, and 25.

The deficiencies of Fukuda are also not corrected by Yoshinaka because Yoshinaka also fails to teach or suggest using the polyester elastomer recited in the claims. Furthermore, Yoshinaka fails to acknowledge enhancing the preform finish property and the shrinkage after preform process and adhesive retention of the bonded portion after a preform process. Yoshinaka also fails to teach or suggest a high melting point crystalline polyester or a low melting point soft polymer. Accordingly, Claims 14, 19, 24, and 29 are believed to patentably distinguish over Yoshinaka and the combination of Fukuda and Yoshinaka.

Since none of the cited references teach or suggest using the polyester elastomer, those skilled in the art would not have reached the claimed invention having the claimed features. In addition, the advantages of using the polyester elastomer could not have been readily expected by those skilled in the art from the cited references. Moreover, none of the cited references teach or suggest the polyester comprising a high melting point crystalline polyester or a low melting point soft polymer, as in preferred embodiments of the present invention. Thus, the claimed invention would not have been obvious over the cited references.

CONCLUSION

Applicants submit that the claims as presently written are allowable and an early and favorable action to that effect is respectfully requested.

The Examiner is invited to contact the undersigned at (202) 220-4200 to discuss any information concerning this application.

PATENT
Docket No. 2298/3

The Office is hereby authorized to charge any fees under 37 C.F.R. 1.16 or 1.17
or credit any overpayment to Kenyon & Kenyon Deposit Account No. 11-0600.

Respectfully submitted,

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MARKED-UP COPY OF AMENDED CLAIMS

IN THE CLAIMS:

Please amend Claims 7, 13, 15, 18, 20, 23, 25, and 28 as follows:

7. (Amended) A heat shrinkable polyester film produced from a polyester composition containing 50 wt% to 99.9 wt% of a polyester and 0.1 wt% to 50 wt% of the polyester elastomer, wherein:

the film has a shrinkage of about 10% to about 40% along its main shrinkage direction when the film is put in [hot] water of 70°C for 5 [sec] seconds;

the film has a shrinkage of about 50% or more along its main shrinkage direction when the film is put in [hot] water of 95°C for 5 [sec] seconds;

the film has a shrinkage of about 10% or less along a direction perpendicular to its main shrinkage direction when the film is put in [hot] water of 95°C for 5 [sec] seconds; and

when the film is formed into a label having a bonded portion, the bonded portion of the label has an adhesive retention of about 95% or more after shrinkage.

13. (Amended) A heat shrinkable polyester film according to claim 7, wherein the film is a [cap sealing] heat shrinkable polyester film for a cap sealing label.

15. (Amended) A heat shrinkable polyester film produced from a polyester composition containing 50 wt% to 99.9 wt% of a polyester and 0.1 wt% to 50 wt% of a polyester elastomer, wherein:

the film has a shrinkage of about 10% to about 40% along its main shrinkage direction when the film is put in [hot] water of 70°C for 5 [sec] seconds;

the film has a shrinkage of about 50% or more along its main shrinkage direction when the film is put in [hot] water of 95°C for 5 [sec] seconds;

the film has a shrinkage of about 10% or less along a direction perpendicular to its main shrinkage direction when the film is put in [hot] water of 95°C for 5 [sec] seconds;

the film has a film haze of about 3% to about 10% for a film thickness of 50 μm ;
and

when the film is formed into a label having a bonded portion, the bonded portion
of the label has an adhesive retention of about 95% or more after shrinkage.

18. (Amended) A heat shrinkable polyester film according to claim 15,
wherein the film is a [cap sealing] heat shrinkable polyester film for a cap sealing label.

20. (Amended) A heat shrinkable polyester film produced from a polyester
composition containing 50 wt% to 99.9 wt% of a polyester and 0.1 wt% to 50 wt% of a
polyester elastomer, wherein:

the film has a shrinkage of about 10% to about 40% along its main shrinkage
direction when the film is put in [hot] water of 70°C for 5 [sec] seconds;

the film has a shrinkage of about 50% or more along its main shrinkage
direction when the film is put in [hot] water of 95°C for 5 [sec] seconds;

the film has a shrinkage of about 10% or less along a direction perpendicular to
its main shrinkage direction when the film is put in [hot] water of 95°C for 5 [sec]
seconds;

the film has a shrinkage of about 15% to about 30% along its main shrinkage
direction when the film is put in [hot] water of 80°C for 5 [sec] seconds after a preform
process; and

when the film is formed into a label having a bonded portion, the bonded portion
of the label has an adhesive retention of about 95% or more after shrinkage.

23. (Amended) A heat shrinkable polyester film according to claim 20,
wherein the film is a [cap sealing] heat shrinkable polyester film for a cap sealing label.

25. (Amended) A heat shrinkable polyester film produced from a polyester
composition containing 50 wt% to 99.9 wt% of a polyester and 0.1 wt% to 50 wt% of a
polyester elastomer, wherein:

the film has a shrinkage of about 10% to about 40% along its main shrinkage direction when the film is put in [hot] water of 70°C for 5 [sec] seconds;

the film has a shrinkage of about 50% or more along its main shrinkage direction when the film is put in [hot] water of 95°C for 5 [sec] seconds;

the film has a shrinkage of about 10% or less along a direction perpendicular to its main shrinkage direction when the film is put in [hot] water of 95°C for 5 [sec] seconds;

the film has a preform finish defective percentage of about 1% or less; and

when the film is formed into a label having a bonded portion, the bonded portion of the label has an adhesive retention of about 95% or more after shrinkage.

28. (Amended) A heat shrinkable polyester film according to claim 25, wherein the film is a [cap sealing] heat shrinkable polyester film for a cap sealing label.